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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,479	02/22/2002	Gottlieb-Georg Lindner	215150US0	6695

22850 7590 11/06/2006

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EXAMINER

NGUYEN, NGOC YEN M

ART UNIT PAPER NUMBER

1754

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,479

Applicant(s)

LINDNER ET AL.

Examiner

Ngoc-Yen M. Nguyen

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1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 5, 10-19 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-5, 10-19, 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 10, 14-17, 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 937 755.

EP '755 discloses precipitated silica granules (note abstract).

Product A(6) has N₂-surface area (i.e. BET surface area) of 201 m²/g; DBP absorption of 250 g/100g; CTAB surface area of 178 m²/g (note Table 1, Run 6) and maximum Choline chloride absorption of 245g/100g (note Table 9, Product A (6)). The DBP/choline chloride absorption is (250/245 =) 1.02.

Product B(18) has N₂-surface area (i.e. BET surface area) of 423 m²/g; DBP absorption of 282 g/100g; CTAB surface area of 337 m²/g (note Table 2, Run 18) and maximum Choline chloride absorption of 300g/100g (note Table 9, Product B (18)). The DBP/choline chloride absorption is (282/300 =) 0.94.

Product C(13) has N₂-surface area (i.e. BET surface area) of 188 m²/g; DBP absorption of 216 g/100g; CTAB surface area of 170 m²/g (note Table 3, Run 13) and maximum Choline chloride absorption of 205g/100g (note Table 9, Product A (6)). The DBP/choline chloride absorption is (216/205 =) 1.05.

Product A Test 3 FSD-plant has N₂-surface area (i.e. BET surface area) of 207 m²/g; DBP absorption of 239 g/100g; CTAB surface area of 183 m²/g (note Table 6, Product A Test 3 FSD-plant) and maximum Choline chloride absorption of 240g/100g (note Table 9, Product A Test 3 FSD-plant). The DBP/choline chloride absorption is (239/240 =) 0.996.

In EP '755, the procedure for testing the maximum choline chloride absorption comprises the steps of adding 75% choline chloride solution dropwise to 10 g of the precipitated silica to be tested in a glass beaker. The mixture is stirred with a spatula. The mixture is watched constantly to check when the maximum absorption has been reached. The maximum choline chloride absorption is reached when no more unloaded particles are to be found in the mixture and said mixture is not yet waxy or smeary. The maximum choline chloride absorption in g/100g = $[(a-10) \times 100] / 10$ where a = total weight (note page 18, line 20 to line 19, line 1). This maximum choline chloride absorption as disclosed in EP '755 is considered the same as the required "choline chloride absorption" since the procedure for measuring the values are the same in EP '755 as in the instant claimed invention.

EP '755 teaches that precipitated silica is known to be used as reinforcing filler for elastomers (note paragraph [0003]) and as a carrier for choline chloride solution (note paragraph [0004]).

For the Sears number, since the product of EP '755 has all the same properties and being made by the same process (note the reasons stated below), the Sears

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number for the product of EP '755 would inherently be the same as that of the claimed product.

The above products anticipate the claimed product.

For the process claims, EP '755 discloses a process for producing precipitated silica by preparing a sodium silicate solution in a container, simultaneously adding sodium silicate and sulfuric acid to the container while maintaining a constant alkali index of 7, stopping the addition of sodium silicate, further adding sulfuric acid until the pH of the precipitation suspension has reached 3.0, and the precipitated silica is separated by means of a filter press and eventually spray dried (note Example 3).

The precipitated silica as disclosed in EP '755 is contacted with choline chloride solution (note Table 9).

The process of EP '755 anticipates the claimed process.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-5, 10, 13-17, 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '755.

EP '755 discloses a precipitated silica product and a process of making thereof as stated in the above rejection.

For other values other than those disclosed in the Examples, EP '755 further discloses the broad ranges such as for product C, the N₂-surface area (i.e. BET surface area) can be from 180-190 m²/g; DBP absorption can be from 220-320 g/100g; CTAB surface area can be 168-171 m²/g (note page 6, lines 20-22). These ranges overlap the claimed ranges.

With respect to the encompassing and overlapping ranges previously discussed, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time of invention to select the portion of the prior art's range which is within the range of the applicants' claims because it has been held prima facie case of obviousness to select a value in a known range by optimization for the results. *In re Boesch*, 205 USPQ 215. Additionally, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the process condition in EP '755 in order to produce the desired precipitated silica with the properties as listed above.

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Claims 11-12, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '755 as applied to claims 1, 4-5, 10, 13-17, 22-25 above, and further in view of Turke et al (4,001,379).

The differences not yet discussed are EP '755 does not disclose an alkali number of at least 15 and the step of adding of an electrolyte prior to or during the simultaneously adding of sodium silicate and sulfuric acid.

Turk '370 discloses a process for producing silica (i.e., silicic acid) by adding an alkali metal silicate and an acid to an aqueous alkali metal silicate solution while maintaining the alkali number of the reaction mixture substantially constant at a value within the range of 10-40 (note claim 1). Turk '370 also teaches that the precipitation may be effected in the presence of neutral salts (note column 4, lines 53-54). This neutral salt is considered the same as the claimed "electrolyte".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further add a neutral salt (electrolyte) and to optimize the alkali number between 10-40, as suggested by Turk '370, for the process of EP '755 because such conditions are known and desirable in an analogous process for producing precipitated silica.

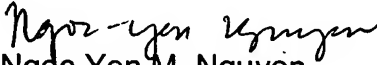
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman can be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 or (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.


Ngoc-Yen M. Nguyen
Primary Examiner
Art Unit 1754

nmn
October 24, 2006